

Claims 1-4 were also rejected under §103 as unpatentable over Hunt in view of Ellis. As indicated in the office action, Hunt provides an athletic shoe comprising an upper, a sole, a rigid heel counter, and a channel in the bottom surface. However, also as recognized in the office action, the channel in Hunt extends transversely and not longitudinally. The office action proposes to modify Hunt by employing at least one longitudinal channel 151 from Fig. 7D and Fig. 15G of the Ellis patent.

It is respectfully submitted that the proposed modification of Hunt of view of the Ellis teaching would not be obvious to one skilled in the art for several reasons. First, to employ the Ellis teaching would be contrary to the Hunt patent. It is believed well settled that a rejection based on combined references is not proper where the secondary reference goes contrary to the primary reference, would render it inoperable, or would render the primary reference unsatisfactory for its intended purpose. In re Ratti, 123 PD 349 (CCPA 1959) (combination not proper where it "would require a substantial reconstruction and redesign of the elements ... as well as a change in the basic principle under which (the reference) was designed to operate.") Accord Ex parte Rosenfeld 130 USPQ 113 (Bd. App. 1961). In the present case Hunt requires midsole material in the heel portion above the groove (col. 3, line 14 of Hunt). Hunt was not concerned with conforming the sole with the contour of the runner's foot. The fact that Hunt employs midsole material between the horizontal slit and sole confirms that fact. Such a sole with heel-conforming characteristics was the entire purpose of the slits in the Ellis patent. Ellis specifically explains in the paragraph beginning at line 31, page 9 that it is the "deformation slits," which he also calls sipes, that provide the

sole with sufficient flexibility to deform in parallel with the natural deformation of the foot.

One with skill in the art would also not look to Ellis for using Ellis's teaching of longitudinal slots because to do so would change the basic principle of the Hunt slots 18 and 30. In Hunt the transverse slots were for the purpose of providing hinge joints so that the thick midsole would allow moderate resistance against bending (Col. 3, lines 55-62 of Hunt).

Even if one were to make the proposed modification (employing the longitudinal slot of Ellis in the sole of Hunt), Applicant's inventions still would not be obtained. As explained above, the transverse slots of Hunt are such that they provide moderate thickness in the midsole above the joint to allow moderate resistance against bending. Such a combination would not meet the specific limitation of applicant's claim 3 which requires that the channel extends upwardly through the sole and is separated from the upper by a connecting portion which is sufficiently small to present minimal transfer of motion between the compression element responsive to stress forces. With the proposed combination of Hunt and Ellis, there would have to be sufficient midsole above the slot to allow the moderate resistance specified by Hunt. In such an arrangement, the moderate resistance against bending would, during the runner's heel strike phase, result in a transfer of force from the lateral heel portion to the medial heel portion. This in turn would produce the undesirable acceleration in pronation movement. The result would be contrary to the operation of Applicant's invention which produces substantially low acceleration of the pronation movement. See the results of the motion study analysis test of Fig. 6, as explained in the paragraph beginning at page 9, line 18 of Applicant's specification.

There is a still further reason why the proposed combination of Hunt with Ellis would be that of combining contrary references. Hunt employs the recommended use of a "shank stiffener 32" (col. 4, lines 38-47). Hunt explains that such a shank stiffener is for purposes of pronation stabilizing in a shoe with a heel lift (col. 4, lines 38-40). Ellis, on the other hand, requires that the sole flex sufficiently to conform with the sole of the user's foot (page 5, line 34 to page 6, line 2 of Ellis). Ellis describes that the shoe conforms to the wearer's foot to allow the shoe to parallel the frontal plane deformation of the sole of the user's foot. Ellis further explains that the key to this function is the "absence of either a conventional rigid heel counter or conventional rigid motion control devices, both of which significantly reduce flexibility in the frontal plane" (col. 11, lines 21-25) Ellis further states that a "board-lasted shoe" would not be very satisfactory either in terms of flexibility or durability. (col. 11, lines 9-12) Therefore, even if one skilled in the art looked to the Ellis patent, he or she would not use the Ellis teaching to modify Hunt because Ellis teaches against the use of any lasting board. The rule on this was enunciated in the leading case of U.S. v Adams, 383 U.S. 39, 15 L. ed. 2d 572 (1966) where the Supreme Court held that prior art which teaches away from the invention is evidence of non-obviousness.

Applicant's claim 1 has been amended to specifically provide that a lasting board mounted in the upper above the sole and that it extends forwardly from the heel portion toward the forefoot portion. The lasting board is indicated by reference numeral 40 in Applicant's Fig. 3. As previously explained, the function of the deformation slits of Ellis is to allow the shoe to deform to the contour of the wearer's foot. This would not be the result

elements is to minimize the acceleration motions of athletic shoes during the initial heel strike to loading phases of the gait cycle. These acceleration motions, which are graphically shown by line 62 of the chart of Fig. 6 from actual tests of shoes incorporating the invention, come much closer to the desired acceleration of barefoot runners shown by line 64 than those of the prior art shoes shown by line 60. The Ellis and Hunt patents do not, either alone or in combination, either seek or obtain such a result. As explained in Applicant's specification, particularly in the paragraph beginning at page 3, line 1, recurring problems due to instability from the inability of a shoe to adjust to a particular wearer's gait and corresponding varying forces are features that tend to interfere with the natural gait of the wearer, of which the accelerating pronation of the individual's foot is one factor.

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in a shoe incorporating a lasting board.

As previously explained, the objective of the Ellis patent is to permit the shoe to deform to the wearer's foot to help control the wearer's gait. Ellis states at page 8, lines 24-29 that both a rigid heel counter and motion control device increase rigidity of the shoe sole and thereby serve to restrict and resist deformation of the shoe sole. The present invention, in contrast, does not rely upon deformation from the use of slots, but instead uses the longitudinal channel to separate the heel portion into laterally adjacent, spaced-apart compression elements. This allows the user's foot to have a more natural gait while wearing a shoe with a motion control device and rigid heel counter (which provides stability during heel strike). Because of this, the Ellis device would not provide the type of stability required in athletic shoes. In that regard, almost all athletic shoes made for active sports such as jogging, racing, basketball, racquetball and cleated sports, use motion control devices or midsole wraps to help stabilize the shoes from excess flexing.

While Ellis states that a board-lasted shoe would not be satisfactory for his invention, the board last is important in the athletic shoe of Applicant's invention. A major problem with a shoe such as Ellis which has no lasting board is that the inside of the shoe would tend to pinch or leave hot spots in the user's heel area. Thus, Figs. 8 and Fig. 12B of Ellis show the pinching that would occur at the angled portion of the upper side of the sole, and this is where the user's foot would rest. Also, as stated above, the object of the slits in the Ellis invention is to cause the shoe to deform to the wearer's foot for a more natural gait. In contrast, in Applicant's invention the purpose of the laterally spaced-apart compression

Accordingly, in view of the foregoing it is respectfully submitted that the claims as now presented define patentable subject matter over the art of record. Reconsideration and allowance of claim 1-4 are respectfully solicited. Should the Examiner have any questions on the foregoing, a telephone call to Applicant's attorney at (415) 781-1989 is invited.

Respectfully submitted,

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